

Recent Fern Literature

A DICTIONARY OF THE FLOWERING PLANTS AND FERNS, by J. C. Willis, 7th ed., revised by H. K. Airy Shaw. University Press, Cambridge, England. 1967. xxii + 1214 + liii pp. \$18.50.—Prof. R. E. Holttum has contributed an Introduction to Pteridophyta and has compiled the generic names of pteridophytes, both those he accepts and their synonyms, in this highly important and useful book. In general he has accepted the generic concepts of Copeland's "Genera Filicum," while admitting their probable artificiality in some cases. It is more difficult to understand his abandoning his own family classification (see J. Linn. Soc. London, Bot. **53**: 123–158. 1947 and Biol. Rev. **24**: 267–296. 1949) in favor of Pichi-Sermolli's, although, as he says in the Introduction, the latter is preferable to Copeland's uneven treatment of families. For in contrast to Holttum's classification, Pichi-Sermolli's (see Uppsala Univ. Aarsskr. **6**: 70–90. 1958) suffers from a most regrettable and, in my opinion, unjustified hierarchical inflation in some places.

Unfortunately, some of Holttum's most important work on Cyatheaceae and Gleicheniaceae is not taken into account in the "Dictionary." *Dicksonia* is in its own family and order, separate from the Cyatheaceae (cf. Phytomorphology **11**: 418–419. 1962), and *Diplopterygium* and *Sticherus* are both accepted (cf. Reinwardtia **4**: 257–261. 1957). Holttum has followed Copeland in recognizing several arbitrary "genera" in the Grammitidaceae and the many "microgenera" of the Hymenophyllaceae. But in the Introduction he acknowledged Morton's more conservative attitude, which he admits is defensible (cf. Contr. U. S. Nat. Herb. **38**: 35–89. 1967 and **38**: 153ff. 1968). Currently Holttum is studying the genera and groups of thelypteroid ferns, and so his recognition of *Cyclosorus*, *Goniopteris*, and *Meniscium*, which are closely allied to one another and to *Thelypteris sensu stricto*, may possibly be revised. In my opinion the greatest difficulties have occurred in the Adiantaceae, where fairly natural alliances, e.g.,

the Onychieae, containing *Actiniopteris*, *Anopteris*, *Cryptogramma*, *Llavea*, *Neurosoria*, and *Onychium*, and the Pellaeae, containing *Doryopteris*, *Ormopteris*, *Pellaea*, and *Saffordia*, have been sundered or markedly split. Among the Cheilantheae, *Adiantopsis* and *Notholaena* have been placed as synonyms of *Cheilanthes*, whereas *Aspidotis* and *Cheiloplecton*, which very possibly are not distinct from *Cheilanthes*, have been maintained. *Negripteris*, like *Sinopteris*, *Mildella*, and *Adiantopsis*, seems to be a specialized evolutionary endpoint in the Cheilantheae, but is given separate family status. The two gymnogrammoid tribes, Gymnopterideae and Eriosoreae, are largely combined in the Gymnogrammaceae, but *Syngrammatopsis*, which is a synonym of *Pterozonium* (Eriosoreae), has been placed in the Lomariopsidaceae. In contrast, the Schizaeaceae, a family closely related to the Adiantaceae, is maintained intact, despite the differences among the generic groups *Actinostachys* and *Schizaea*, *Lygodium*, and *Anemia* and *Mohria*, which could be separated more justifiably into three families than the Adiantaceae is into five.

The strong points of Holttum's compilation lie in his superior knowledge of Old World genera, which exceeds that of any other living pteridologist. But the New World genera, with which he is sometimes less intimately acquainted, have on occasion caused him trouble. Overall, the treatment is usable and certainly worthy of use. It also stands as a reminder to the revisors of the next edition of the "Dictionary"—and to pteridologists in general—that contributions of this breadth are best accomplished by the cooperation of several knowledgable workers.—D. B. L.